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PATENT APPLICATION

ATTORNEY DOCKET NO. 10008147-1IN THE  
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Cipriano Santos, et al.

Confirmation No.:

Application No.: 09/851,514

Examiner: Arthur D. Duran

Filing Date: May 8 2001

Group Art Unit: 3622

Title: Method and System of Determining Differential Promotion Allocations

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PO Box 1450  
Alexandria, VA 22313-1450TRANSMITTAL OF APPEAL BRIEFTransmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on Oct 25 2005.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) \$500.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

☐ (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below:☐ 1st Month  
\$120☐ 2nd Month  
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\$1590☐ The extension fee has already been filed in this application.☒ (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

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Typed Name: Carrie Mckerley

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Respectfully submitted,

Cipriano Santos, et al.

By: 

Philip S. Lyren

Attorney/Agent for Applicant(s)

Reg No. : 40,709

Date : Dec 26 2005

Telephone : 281-514-8236

Rev 10/05 (ApBrief)

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants:	Cipriano Santos, et al.	Examiner:	Arthur D. Duran
Serial No.:	09/851,514	Group Art Unit:	3622
Filed:	May 8, 2001	Docket No.:	10008147-1
Title:	Method and System of Determining Differential Promotion Allocations		

**APPEAL BRIEF UNDER 37 C.F.R. § 41.37**

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Alexandria, VA 22313-1450

Sir:

This Appeal Brief is filed in response to the Final Office Action mailed July 25, 2005 and the Notice of Appeal filed on October 25, 2005.

**AUTHORIZATION TO DEBIT ACCOUNT**

It is believed that no extensions of time or fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required (including fees for net addition of claims) are hereby authorized to be charged to Hewlett-Packard Development Company's deposit account no. 08-2025.

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Application No. 09/851,514  
Appeal Brief

### **I. REAL PARTY IN INTEREST**

The real party-in-interest is the assignee, Hewlett-Packard Company, a Delaware corporation, having its principal place of business in Palo Alto, California.

### **II. RELATED APPEALS AND INTERFERENCES**

There are no known related appeals or interferences known to appellant, the appellant's legal representative, or assignee that will directly affect or be directly affected by or have a bearing on the Appeal Board's decision in the pending appeal.

### **III. STATUS OF CLAIMS**

Claims 1, 2, and 4 – 20 stand finally rejected. The rejection of claims 1, 2, and 4 – 20 is appealed.

### **IV. STATUS OF AMENDMENTS**

No amendments were made after receipt of the Final Office Action. All amendments have been entered.

### **V. SUMMARY OF CLAIMED SUBJECT MATTER**

The following provides a concise explanation of the subject matter defined in each of the claims involved in the appeal, referring to the specification by page and line number and to the drawings by reference characters, as required by 37 C.F.R. § 41.37(c)(1)(v). Each element of the claims is identified by a corresponding reference to the specification and drawings where applicable. Note that the citation to passages in the specification and drawings for each claim element does not imply that the limitations from the specification and drawings should be read into the corresponding claim element or that these are the sole sources in the specification supporting the claim features.

#### **Claim 1**

A computer implemented method of determining differential promotion allocation among prospective customers comprising the steps of (FIGS. 1-3: p. 2, lines 7-14; p. 6, lines 22-32):

Application No. 09/851,514  
Appeal Brief

entering, into a computer, management information that is specific to business management objectives and constraints, including entering budget information (p. 9, lines 4-38); and

defining, with the computer, a campaign plan for allocating presentations of a plurality of said promotions among said customers, including using automated processing to form said campaign plan on the basis of customer segments and said management information, said customer segments being based upon customer commonalities with respect to at least one customer attribute, said campaign plan being defined to automatically detecting contradictions between said constraints and other aspects of said entered management information, automatically identifying resolutions to said contradictions, and implementing said resolutions in said campaign plan (p. 6, line 30 – p. 7, line 20; p. 10, line 35 – p. 11, line 22).

#### **Claim 2**

The method of claim 1 wherein said step of defining said campaign plan includes: automatically identifying an inconsistency in achieving two of said business management objectives (p. 4, lines 24-29; p. 10, line 35 – p. 11, line 22);

automatically determining a guideline for resolving a trade-off between said two business management objectives (p. 9, lines 4-27; p. 11, lines 23-30); and

utilizing said guideline in configuring said campaign plan (p. 11, line 31 – p. 12, line 2).

#### **Claim 4**

The method of claim 1 wherein said step of automatically detecting said contradictions includes generating a report which identifies said contradictions and said resolutions (p. 11, lines 1-10).

#### **Claim 9**

The method of claim 8 wherein said step of entering said market data includes providing null promotion data for individual said customer segments, said null promotion data being indicative of probabilities of achieving said business management objectives

Application No. 09/851,514  
Appeal Brief

during an absence of said promotions (p. 4, line 36 – p. 5, line 15; p. 6, lines 28-29).

### **Claim 11**

A computer system for forming a promotion campaign plan comprising (FIG. 1: p. 5, lines 34-36):

a server (FIG. 1: #16) coupled to a database (FIG. 1: #28; p. 6, lines 8-21),  
wherein the database includes:

stored customer segment information indicative of mapping a plurality of customers to a smaller number of customer segments, said mapping being based on attributes that are perceived as being relevant to customer activity when presented with promotions (p. 3, lines 7-14; p. 7, lines 8-20);

stored promotion information regarding a plurality of promotions (p. 7, lines 21-26; p. 4, line 36 – p. 5, line 15);

stored market information regarding marketing considerations relevant to said promotions (p. 4, line 30 – p. 5, line 15);

stored management information regarding business objectives and business constraints relevant to said promotions (p. 4, lines 4-14; p. 9, lines 4-38); and

wherein the server includes an optimization engine configured to design a promotion campaign as an algorithmic response to each of said stored customer segment information, said stored promotion information, said stored market information and said stored management information, wherein said promotion campaign indicates promotion strategies on a promotion-by-promotion and segment-by-segment basis, said optimization engine being enabled to detect and automatically address inconsistencies and contradictions with the management information in achieving said business objectives and business constraints, automatically identify resolutions to said inconsistencies and contradictions, and implement said resolutions in said promotion campaign plan (p. 3, line 27 – p. 4, line 3; p. 9, lines 4-27; p. 10, line 35 – p. 11, line 22).

### **Claim 16**

The system of claim 11 wherein said optimization engine is cooperative with an efficiency frontier engine (FIG. 3: #80) that is configured to recognize said

Application No. 09/851,514  
Appeal Brief

inconsistencies and to determine trade-offs among said business objectives, said efficiency frontier engine being responsive to a hierarchy of said business objectives (p. 8, line 29 – p. 9, line 27).

#### **Claim 17**

A computer implemented method of determining differential promotion allocation among website visitors comprising the automated programming steps of (FIGS. 1-3: p. 3, lines 7-14; p. 6, lines 8-29):

entering, into a computer, market data that includes visitor conversion information and null promotion information, said conversion information being specific to visitor groups that are based on common attributes among said visitors, said conversion information identifying group-by-group characteristics relating to desired website visitor activities, said null promotion information identifying factors specific to said groups and said desired website visitor activities when there is an absence of promotions that are designed to promote said website visitor activities (p. 4, line 30 – p. 5, line 15; p. 6, line 16 – p. 7, line 6);

entering, into the computer, management data that includes business objectives and business constraints, said business objectives including information regarding target numbers of conversions and target revenue and profit levels, said business constraints including group-by-group budget constraints (p. 4, lines 4-14; p. 9, lines 4-38); and

computing, with the computer, a campaign plan that is specific to each said group and each said promotion, said campaign plan being based upon said market and management data and automatically detecting and addressing contradictions among said objectives, automatically identifying resolutions to said contradictions, and implementing said resolutions in said campaign plan (p. 6, line 30 – p. 7, line 20; p. 10, line 35 – p. 11, line 22).

#### **Claim 19**

The method of claim 17 wherein said contradictions are mutually exclusive (p. 11, lines 1-10).



Application No. 09/851,514  
Appeal Brief

#### **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

Claims 1-2 and 4-20 rejected under 35 USC § 103(a) as being unpatentable over USPN 5,848,396 (Gerace) in view of USPN 5,406,477 (Harhen) and USPN 5,687,322 (Deaton).

Application No. 09/851,514  
Appeal Brief

## **VII. ARGUMENT**

The rejection of claims 1-2 and 4-20 is improper, and Applicants respectfully requests withdraw of this rejection.

The claims do not stand or fall together. Instead, Applicants present separate arguments for various independent and dependent claims. Each of these arguments is separately argued below and presented with separate headings and sub-heading as required by 37 C.F.R. § 41.37(c)(1)(vii) as follows:

- I. Claims 1, 5-8, 10-15, 17-18, and 20, with claim 1 being representative of the group.
- II. Claim 2.
- III. Claim 4.
- IV. Claim 9.
- V. Claim 16.
- VI. Claim 19.

### **Claim Rejections: 35 USC § 103**

Claims 1-2 and 4-20 rejected under 35 USC § 103(a) as being unpatentable over USPN 5,848,396 (Gerace) in view of USPN 5,406,477 (Harhen) and USPN 5,687,322 (Deaton). Applicants respectfully traverse:

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art cited must teach or suggest all the claim limitations. See M.P.E.P. § 2143. Applicants assert that the rejection does not satisfy these criteria.

Application No. 09/851,514  
Appeal Brief

**I. Claims 1, 5-8, 10-15, 17-18, and 20**

This group contains three independent claims (1, 11, and 17). Applicants select and argue independent claim 1 as being representative of this group.

**Elements of Independent Claims Not Taught or Shown**

The independent claims recite numerous recitations that are not taught or suggested in Gerace in view of Harhen and Deaton. For example, claim 1 recites (emphasis added):

said campaign plan being defined to **automatically detecting contradictions** between said constraints and other aspects of said entered management information, **automatically identifying resolutions** to said contradictions, and implementing said resolutions in said campaign plan.

Nowhere do Gerace, Harhen, and/or Deaton teach or suggest the noted recitations. On page 6, the Office Action makes the following admission:

Gerace does not explicitly disclose automatically detecting contradictions between said constraints and other aspects of said entered management information;  
automatically identifying resolutions to said contradictions, and implementing said resolutions in said campaign plan.

Applicants agree with this admission. The Office Action, however, attempts to cure these deficiencies with Harhen. Applicants respectfully disagree.

The Office Action cites several locations in Harhen for teaching the noted recitations. Applicants address each of these citations.

First, the Office Action cites the Abstract of Harhen. Portions of the Abstract are reproduced below:

Application No. 09/851,514  
Appeal Brief

Applying reasoning methods to a single projection problem generates a set of conflicting intermediate hypotheses that the present invention can resolve to form a single final hypothesis through a reconciliation process that evaluates quality factors associated with the intermediate hypotheses. A problem solution tree tracks the solution process to provide to the user a full explanation of the methods chosen or discarded and data relied upon or disregarded.

The Abstract of Harhen does not teach automatically detecting conflicting information of **management information** and automatically identifying resolutions to the conflicting information. In other words, Harhen does not teach the automated process of both (1) detecting contradictions in management information and (2) identifying resolutions to the contradictions in the management information. Further, the element of management information must be kept in context of the recitations of the claim. Claim 1 is a computer method for determining differential promotion allocation among prospective customers. Management information that is specific to business management objective is entered. The teachings in Harhen's Abstract cannot be pulled out of context and used as a piecemeal hindsight construction to teach elements not suggested in Gerace.

Second, the Office Action cites Harhen at col. 6, lines 45-67 and col. 6, lines 52-55. Portions of this section are reproduced below:

This architecture enables the system to be self-structuring, and enables the system to deal either with partial models of incomplete information or with situations when conflicting information appears in the knowledge base. In this manner, diverse and inconsistent knowledge such as budgets, plans, expectations, causal models and historical knowledge, can be integrated and interpreted within a single architecture. (Col. 6, lines 49-56).

Application No. 09/851,514  
Appeal Brief

This section of Harhen teaches that the system can deal with situations when conflicting information appears in the knowledge base. The important question is: How does Harhen deal with such situations? Harhen explains that inconsistent knowledge “can be integrated and interpreted within a single architecture.” Harhen does not teach automatically detecting conflicting information of management information and automatically identifying resolutions to the conflicting information. In other words, Harhen does not teach the automated process of both (1) detecting contradictions and (2) identifying resolutions to the contradictions. Also, Harhen never teaches that the conflicting information is “aspects of entered management information” as recited in claim 1.

Third, the Office Action cites Harnen at col. 14, lines 52-28, reproduced below (emphasis added):

The present invention presents an architecture that **allows the user to declare** the known conceptual relationships that describe his or her planning domain. Through progressive refinement of this conceptual map, **the user, in his interaction with the system,** approaches an understanding of the implications and contradictions of such a network of knowledge. In this manner, he deepens his knowledge of the planning context. (Col. 14, lines 50-59).

This section of Harhen teaches that **the user interacts with the system** for understanding the contradictions. Applicants respectfully submit that this section of Harhen teaches away from the recitations in the claims. Nowhere does this section of Harhen teach or suggest automatically detecting contradictions of management information, automatically identifying resolutions to the contradictions, and implementing the resolutions in the campaign plan.

Fourth, the Office Action cites Harnen col. 41, lines 11-20, reproduced below (emphasis added):

Application No. 09/851,514  
Appeal Brief

More than one statement, such as an opinion, may be attached to a variable. Each statement results in a separate intermediate hypothesis and all are evaluated in the reconciliation process. **Thus, the system supports contradictory opinions in making a variable projection.** As all statements are considered to be axiomatic equally, the reconciliation process looks to other factors beyond the proof values such as the date of the opinion (with the latest being most valuable), to solve conflicts.

This section of Harhen teaches that the system supports contradictory opinions in making a variable projection. This section of Harhen does not teach or suggest automatically identifying resolutions to contradictions of management information and then **implementing the resolutions in the campaign plan.**

Further, claim 1 recites "a campaign plan for allocating presentations of a plurality of promotions among said customers." The claim then recites "implementing said resolutions in said campaign plan." Harhen does not teach or suggest a campaign plan for allocating presentations of a plurality of promotions to customers and implementing resolutions in the campaign plan. By contrast, Harhen teaches a computer-based method for enterprise analysis so a user can generate value projections (see Abstract and Summary). Harhen does not teach or suggest a campaign plan of promotions among customers and then implementing resolutions in the campaign plan of promotions.

For at least these reasons, Gerace in view of Harhen and Deaton does not teach or suggest all of the recitations in claim 1. Independent claims 11 and 17 recite some similar recitations as recited in claim 1. Thus, for at least the reasons given in connection with independent claim 1, independent claims 11 and 17 are allowable over Gerace in view of Harhen and Deaton.

A dependent claim inherits the recitations of an independent claim. Thus, for at least the reasons given in connection with independent claims 1, 11, and 17, all dependent claims are allowable over Gerace in view of Harhen and Deaton.

Application No. 09/851,514  
Appeal Brief

**No Suggestion or Motivation to Combine or Modify Gerace and Harhen**

On page 6, the Office Action makes the following admission:

Gerace does not explicitly disclose automatically detecting contradictions between said constraints and other aspects of said entered management information;  
automatically identifying resolutions to said contradictions, and implementing said resolutions in said campaign plan.

Applicants agree with this admission. The Office Action, however, attempts to cure these deficiencies with Harhen. Applicants respectfully disagree since no suggestion or motivation exists for combining and/or modifying Gerace and Harhen.

Gerace teaches a method and apparatus for determining behavior or psychographic profile of a computer user. To accomplish this, Gerace teaches "a tracking and profiling member for recording user activity" (see col. 2, lines 6-11). Nowhere does Gerace teach, suggest, or even contemplate automatically detecting contradictions of management information, automatically identifying resolutions to the contradictions, and implementing the resolutions in the campaign plan.

Harhen teaches a computer-based method for enterprise analysis that a user can use to generate value projections (see Abstract). Harhen teaches using the computer-based method for solving deficiencies in strategic planning in manufacturing (see col. 4, lines 32-36). Unlike Gerace, nowhere does Harhen teach or suggest a method or apparatus for determining behavior or psychographic profiles of a computer user. Thus, **Gerace and Harhen are directed to solving completely different problems.**

Harhen does mention the phrase "the system supports contradictory opinions in making a variable projection" (see col. 41, lines 15-16). Nowhere does Harhen teach or suggest automatically detecting contradictions of management information, automatically identifying resolutions to the contradictions, and implementing the resolutions in the campaign plan. Instead, the contradictory opinions in Harhen are for making a variable projection.

Application No. 09/851,514  
Appeal Brief

The Examiner must provide *objective evidence*, rather than subjective belief and unknown authority, of the requisite motivation or suggestion to combine or modify the cited references. *In re Lee*, 61 U.S.P.Q.2d. 1430 (Fed. Cir. 2002). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Such teaching or suggestion does not exist.

In short, Harhen and Gerace are directed to different problems and solutions. No motivation exists in the references for combining the teachings.

Further, Applicants argue that the Examiner is using hindsight and a piecemeal construction to combine Harhen and Gerace to teach the elements of claim 1. When prior art references require a selected combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gained from the invention itself, i.e., something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988). One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

For at least these reasons, the claims are allowable over Gerace in view of Harhen and Deaton.



Application No. 09/851,514  
Appeal Brief

### **No Expectation of Success**

Even assuming arguendo that the combination of Harhen and Gerace is proper (which it is not), the combination does not teach or suggest the recitations of the claims.

As noted above, Harhen merely teaches that a system can support contradictory opinions in making a variable projection. Gerace is completely silent on detecting and identifying contradictions and on implementing resolutions. Further, Harhen does not teach or suggest that resolutions to contradictions are implemented in a promotion campaign plan directed to customers. New elements and significant substitutions would have to be made to Gerace and/or Harhen to arrive at the claimed recitations. Further, this combination would not yield a reasonable expectation of success for automatically detecting contradictions of management information, automatically identifying resolutions to the contradictions, and implementing the resolutions in the campaign plan.

The Examiner argues that Applicants have not submitted evidence and thus have not proven no expectation of success. Applicants respectfully disagree. The law does not require Applicants to submit such evidence to show no expectation of success. Instead, the law states that Applicant may submit such evidence for consideration. Such evidence, though, is not required.

For at least these reasons, the claims are allowable over Gerace in view of Harhen and Deaton.

### **II. Claim 2**

Claim 2 recites a computer implemented method that automatically identifies an inconsistency in achieving two business management objectives. The claim then recites “**automatically determining a guideline for resolving a trade-off** between said two business management objectives” (emphasis added). Nowhere does that art of record teach or suggest these recitations. The Office Action argues these recitations are taught in Gerace at col. 15, lines 10-15 and col. 15, lines 29-35. Applicants respectfully disagree.

Column 15, lines 10-15 in Gerace teaches a mathematical equation for ranking the advertisements based on a number of hits and clicks. Column 15, lines 29-35 teaches a traditional regression analysis used to determine the weight of criteria for the intended customers. Together, these sections of Gerace teach a program that uses an equation to

Application No. 09/851,514  
Appeal Brief

rank advertisements. The advertisements can be adjusted based on how criteria are weighted. These teachings, though, are much different than the elements recited in the claim. Claim 2 recites that the program automatically identifies an inconsistency and then automatically determines a guideline for resolving a trade-off. Gerace never determines inconsistencies in business objectives. Further, Gerace never determines **guidelines for resolving a trade-off** between the business objectives. Again, Gerace merely teaches that the program can adjust advertisements based on how criteria are weighted, not determine inconsistencies and guidelines for resolving a trade-off as claimed.

### III. Claim 4

Claim 4 recites automatically detecting contradictions and then generating a report which **identifies the contradictions and resolutions**. In other words, contradictions in the management information are automatically identified. Then, the program generates a report that includes an identification of the contradictions and resolutions. The Office Action argues these recitations are taught in Gerace at col. 33, line 35 – col. 34, line 27. Applicants respectfully disagree.

The cited section of Gerace is an appendix that uses the word “report.” Claim 4, however, is not simply claiming use of a report. By contrast, claim 4 is claiming a report that includes an identification of the contradictions and resolutions. Nowhere does the cited section of Gerace teach or suggest such a report. This section of Gerace teaches web-based reporting that includes advertisements and other reports not related whatsoever to the claim recitations of claim 4.

### IV. Claim 9

Claim 9 recites entering market data that includes null promotion data. According to MPEP § 2111.01, the words of a claim must be given their plain meaning unless they are defined in the specification. Applicants’ specification provides a definition for the term “null promotion” as follows:

A “null promotion” of a product is a conversion that occurs without the presentation of a promotion. (See p. 6, lines 28-29).

Application No. 09/851,514  
Appeal Brief

The issue is: Does Gerace teach or suggest entering market data that includes null promotion data as this term is defined in Applicants' specification? Gerace does not.

The Office Action cites column 19, lines 19-25 of Gerace. This section of Gerace of reproduced below for convenience:

As such, program 31 tracks advertiser usage as user information and develops demographic profiles for advertisers. This data is stored in the sponsor's Users Objects 33a (FIG. 5a). When the sponsor-user of the example decides to create a second package, the sponsor-user clicks on a "request an ad package" option and completes a form detailing the package (number of hits/click throughs requested, profiling, etc.).

As clearly taught, this section of Gerace teaches a program that tracks advertiser usage and develops demographic profiles for advertisers. By contrast, claim 9 recites entering market data that includes null promotion data that is defined as a conversion that occurs without the presentation of a promotion.

#### **V. Claim 16**

Claim 16 recites an efficiency frontier engine that recognizes inconsistencies and determines trade-offs among business objectives. In other words, the optimization engine detects inconsistencies with the management information in achieving business objectives and the frontier engine recognizes these inconsistencies and determines trade-offs. Nowhere does the art of record teach or suggest these recitations. The Office Actions cites Gerace at column 12, lines 27-35 for teaching claim 16. Applicants respectfully disagree.

Column 12, lines 27-35 of Gerace is reproduced for convenience:

In a preferred embodiment, the sponsor specifies in Ad Series Object 33c the required and/or preferred psychographic and/or

Application No. 09/851,514  
Appeal Brief

demographic criteria and relative importance (e.g., weight) with respect to each criterion.

As clearly taught, this section of Gerace teaches that the sponsor of an advertisement can specify the psychographic or demographic criteria. Nowhere does this section teach or suggest that an efficiency frontier engine that recognizes inconsistencies and determines trade-offs among business objectives as recited in claim 16.

#### **VI. Claim 19**

In the base claim, a campaign plan is based on management data that includes business objectives. The computer method automatically detects and addresses contradictions among the business objectives. Claim 19 further recites that the contradictions are **mutually exclusive**. Nowhere does the art of record teach or suggest these recitations.

The Office Action never cites a location in the art of record for teaching the elements of claim 19.<sup>1</sup> Instead, the Office Action cites a dictionary definition of “mutually exclusive” and concludes: “Therefore, it is obvious that the inconsistencies and contradictions of Harhen can be mutually exclusive.”<sup>2</sup> Applicants argue that this argument is circular. In other words, the Examiner’s argument is as follows: Since Harhen teaches contradictions and since the dictionary defines “mutually exclusive,” it would be obvious for Harhen’s contradictions to be mutually exclusive. This argument is legally improper.

In contrast to the Examiner’s position, Applicants argue that the law states there must be a suggestion or motivation in the references to modify the teachings. The Examiner cannot use the dictionary in an effort to **piecemeal construct with hindsight** the recitations of the claims. Gerace and Harhen do not teach or suggest that the contradictions can be mutually exclusive.

---

<sup>1</sup> See Final OA at p. 2: Claims 1, 11, 17, 19, and 20 are collectively rejected, but claim 19 is never separately addressed.

<sup>2</sup> See Final OA at p. 7.

Application No. 09/851,514  
Appeal Brief

### CONCLUSION

In view of the above, Applicants respectfully request the Board of Appeals to reverse the Examiner's rejection of all pending claims.

Any inquiry regarding this Amendment and Response should be directed to Philip S. Lyren at Telephone No. (281) 514-8236, Facsimile No. (281) 514-8332. In addition, all correspondence should continue to be directed to the following address:

**Hewlett-Packard Company**  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, Colorado 80527-2400

Respectfully submitted,

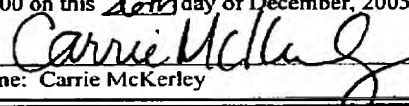


Philip S. Lyren  
Reg. No. 40,709  
Ph: 281-514-8236

#### CERTIFICATE UNDER 37 C.F.R. 1.8

The undersigned hereby certifies that this paper or papers, as described herein, is being transmitted to the United States Patent and Trademark Office facsimile number 571-273-8300 on this 26th day of December, 2005.

By

  
Name: Carrie McKerley

Application No. 09/851,514  
Appeal Brief

### **VIII. Claims Appendix**

1. A computer implemented method of determining differential promotion allocation among prospective customers comprising the steps of:

entering, into a computer, management information that is specific to business management objectives and constraints, including entering budget information; and

defining, with the computer, a campaign plan for allocating presentations of a plurality of said promotions among said customers, including using automated processing to form said campaign plan on the basis of customer segments and said management information, said customer segments being based upon customer commonalities with respect to at least one customer attribute, said campaign plan being defined to automatically detecting contradictions between said constraints and other aspects of said entered management information, automatically identifying resolutions to said contradictions, and implementing said resolutions in said campaign plan.

2. The method of claim 1 wherein said step of defining said campaign plan includes:

automatically identifying an inconsistency in achieving two of said business management objectives;

automatically determining a guideline for resolving a trade-off between said two business management objectives; and

utilizing said guideline in configuring said campaign plan.

3. (canceled)

4. The method of claim 1 wherein said step of automatically detecting said contradictions includes generating a report which identifies said contradictions and said resolutions.

5. The method of claim 1 wherein said step of entering said management information includes entering data indicative of budget constraints (1) for individual said customer segments and (2) for said overall campaign plan.

Application No. 09/851,514  
Appeal Brief

6. The method of claim 1 wherein said campaign plan is specific to application via the global communications network referred to as the Internet.

7. The method of claim 1 wherein said campaign plan is specific to application via a telecommunications network.

8. The method of claim 1 further comprising a step of entering market data on which said campaign plan is further based, including entering conversion data that is indicative of the responsiveness of each said customer segment to said promotions.

9. The method of claim 8 wherein said step of entering said market data includes providing null promotion data for individual said customer segments, said null promotion data being indicative of probabilities of achieving said business management objectives during an absence of said promotions.

10. The method of claim 1 further comprising a step of entering supply chain data on which said campaign plan is further based, said supply chain data being indicative of availability of resources that are subject matter of said promotions.

11. A computer system for forming a promotion campaign plan comprising:  
a server coupled to a database, wherein the database includes:  
stored customer segment information indicative of mapping a plurality of customers to a smaller number of customer segments, said mapping being based on attributes that are perceived as being relevant to customer activity when presented with promotions;  
stored promotion information regarding a plurality of promotions;  
stored market information regarding marketing considerations relevant to said promotions;  
stored management information regarding business objectives and business constraints relevant to said promotions; and

Application No. 09/851,514  
Appeal Brief

wherein the server includes an optimization engine configured to design a promotion campaign as an algorithmic response to each of said stored customer segment information, said stored promotion information, said stored market information and said stored management information, wherein said promotion campaign indicates promotion strategies on a promotion-by-promotion and segment-by-segment basis, said optimization engine being enabled to detect and automatically address inconsistencies and contradictions with the management information in achieving said business objectives and business constraints, automatically identify resolutions to said inconsistencies and contradictions, and implement said resolutions in said promotion campaign plan.

12. The system of claim 11 wherein said stored management information includes budget constraints for each said customer segment, said optimization engine being configured to be responsive to said budget constraints such that said promotion campaign includes designations of portions of specific said customer segments that are to be presented with particular said promotions.

13. The system of claim 11 wherein said optimization engine is cooperative with a feasibility engine that is configured to recognize and address said contradictions in said stored management information, said feasibility engine being enabled to determine resolutions to said contradictions that involve said business constraints.

14. The system of claim 11 further including stored supply data regarding availability of either or both of goods and services being offered to said customers.

15. The system of claim 14 wherein said stored supply data indicates on-hand inventory and currently ordered inventory.

16. The system of claim 11 wherein said optimization engine is cooperative with an efficiency frontier engine that is configured to recognize said inconsistencies and to determine trade-offs among said business objectives, said efficiency frontier engine being responsive to a hierarchy of said business objectives.



Application No. 09/851,514  
Appeal Brief

17. A computer implemented method of determining differential promotion allocation among website visitors comprising the automated programming steps of:

entering, into a computer, market data that includes visitor conversion information and null promotion information, said conversion information being specific to visitor groups that are based on common attributes among said visitors, said conversion information identifying group-by-group characteristics relating to desired website visitor activities, said null promotion information identifying factors specific to said groups and said desired website visitor activities when there is an absence of promotions that are designed to promote said website visitor activities;

entering, into the computer, management data that includes business objectives and business constraints, said business objectives including information regarding target numbers of conversions and target revenue and profit levels, said business constraints including group-by-group budget constraints; and

computing, with the computer, a campaign plan that is specific to each said group and each said promotion, said campaign plan being based upon said market and management data and automatically detecting and addressing contradictions among said objectives, automatically identifying resolutions to said contradictions, and implementing said resolutions in said campaign plan.

18. The method of claim 17 further comprising entering supply data for use in said computing step, said supply data being indicative of goods or services that are offered to said website visitors.

19. The method of claim 17 wherein said contradictions are mutually exclusive.

20. The method of claim 17 wherein said computing step includes designating percentages for each said group and each said promotion, where each percentage represents the portion of said website visitors within a particular said group that will be presented with a particular said promotion, with at least some of said percentages being

Application No. 09/851,514  
Appeal Brief

less than one hundred percent.

Application No. 09/851,514  
Appeal Brief

**IX. EVIDENCE APPENDIX**

None.

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HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, Colorado 80527-2400

PATENT APPLICATION

ATTORNEY DOCKET NO. 10008147-1IN THE  
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Cipriano Santos, et al.

Confirmation No.:

Application No.: 09/851,514

Examiner: Arthur D. Duran

Filing Date: May 8 2001

Group Art Unit: 3622

Title: Method and System of Determining Differential Promotion Allocations

Mail Stop Appeal Brief-Patents  
Commissioner For Patents  
PO Box 1450  
Alexandria, VA 22313-1450TRANSMITTAL OF APPEAL BRIEFTransmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on Oct 25 2005.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) \$500.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

☐ (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below:☐ 1st Month  
\$120☐ 2nd Month  
\$450☐ 3rd Month  
\$1020☐ 4th Month  
\$1590☐ The extension fee has already been filed in this application.☒ (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.Please charge to Deposit Account 08-2025 the sum of \$ 500. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.☐ I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:  
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Date of facsimile: Dec 26 2005

Typed Name: Carrie Mckerley

Signature: 

Respectfully submitted,

Cipriano Santos, et al.

By: 

Philip S. Lyren

Attorney/Agent for Applicant(s)

Reg No.: 40,709

Date: Dec 26 2005

Telephone: 281-514-8236

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PATENT APPLICATION

HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, Colorado 80527-2400ATTORNEY DOCKET NO. 10008147-1IN THE  
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Cipriano Santos, et al.

Confirmation No.:

Application No.: 09/851,514

Examiner: Arthur D. Duran

Filing Date: May 8 2001

Group Art Unit: 3622

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Mail Stop Appeal Brief-Patents  
Commissioner For Patents  
PO Box 1450  
Alexandria, VA 22313-1450TRANSMITTAL OF APPEAL BRIEFTransmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on Oct 25 2005.

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(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

☐ (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below:☐ 1st Month  
\$120☐ 2nd Month  
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\$1020☐ 4th Month  
\$1590☐ The extension fee has already been filed in this application.☒ (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.Please charge to Deposit Account 08-2025 the sum of \$ 500. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.☐ I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:  
Commissioner for Patents, Alexandria, VA 22313-1450  
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☒ I hereby certify that this paper is being transmitted to the Patent and Trademark Office facsimile number (571)273-8300.

Date of facsimile: Dec 26 2005

Typed Name: Carrie Mckerley

Signature: 

Respectfully submitted,

Cipriano Santos, et al.

By: 

Philip S. Lyren

Attorney/Agent for Applicant(s)

Reg No.: 40,709

Date: Dec 26 2005

Telephone: 281-514-8238

Rev 10/05 (ApBrief)

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DEC 26 2005

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants:	Cipriano Santos, et al.	Examiner:	Arthur D. Duran
Serial No.:	09/851,514	Group Art Unit:	3622
Filed:	May 8, 2001	Docket No.:	10008147-1
Title:	Method and System of Determining Differential Promotion Allocations		

**APPEAL BRIEF UNDER 37 C.F.R. § 41.37**

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This Appeal Brief is filed in response to the Final Office Action mailed July 25, 2005 and the Notice of Appeal filed on October 25, 2005.

**AUTHORIZATION TO DEBIT ACCOUNT**

It is believed that no extensions of time or fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required (including fees for net addition of claims) are hereby authorized to be charged to Hewlett-Packard Development Company's deposit account no. 08-2025.

Application No. 09/851,514  
Appeal Brief

### **I. REAL PARTY IN INTEREST**

The real party-in-interest is the assignee, Hewlett-Packard Company, a Delaware corporation, having its principal place of business in Palo Alto, California.

### **II. RELATED APPEALS AND INTERFERENCES**

There are no known related appeals or interferences known to appellant, the appellant's legal representative, or assignee that will directly affect or be directly affected by or have a bearing on the Appeal Board's decision in the pending appeal.

### **III. STATUS OF CLAIMS**

Claims 1, 2, and 4 – 20 stand finally rejected. The rejection of claims 1, 2, and 4 – 20 is appealed.

### **IV. STATUS OF AMENDMENTS**

No amendments were made after receipt of the Final Office Action. All amendments have been entered.

### **V. SUMMARY OF CLAIMED SUBJECT MATTER**

The following provides a concise explanation of the subject matter defined in each of the claims involved in the appeal, referring to the specification by page and line number and to the drawings by reference characters, as required by 37 C.F.R. § 41.37(c)(1)(v). Each element of the claims is identified by a corresponding reference to the specification and drawings where applicable. Note that the citation to passages in the specification and drawings for each claim element does not imply that the limitations from the specification and drawings should be read into the corresponding claim element or that these are the sole sources in the specification supporting the claim features.

#### **Claim 1**

A computer implemented method of determining differential promotion allocation among prospective customers comprising the steps of (FIGS. 1-3: p. 2, lines 7-14; p. 6, lines 22-32):

Application No. 09/851,514  
Appeal Brief

entering, into a computer, management information that is specific to business management objectives and constraints, including entering budget information (p. 9, lines 4-38); and

defining, with the computer, a campaign plan for allocating presentations of a plurality of said promotions among said customers, including using automated processing to form said campaign plan on the basis of customer segments and said management information, said customer segments being based upon customer commonalities with respect to at least one customer attribute, said campaign plan being defined to automatically detecting contradictions between said constraints and other aspects of said entered management information, automatically identifying resolutions to said contradictions, and implementing said resolutions in said campaign plan (p. 6, line 30 – p. 7, line 20; p. 10, line 35 – p. 11, line 22).

#### **Claim 2**

The method of claim 1 wherein said step of defining said campaign plan includes: automatically identifying an inconsistency in achieving two of said business management objectives (p. 4, lines 24-29; p. 10, line 35 – p. 11, line 22);

automatically determining a guideline for resolving a trade-off between said two business management objectives (p. 9, lines 4-27; p. 11, lines 23-30); and

utilizing said guideline in configuring said campaign plan (p. 11, line 31 – p. 12, line 2).

#### **Claim 4**

The method of claim 1 wherein said step of automatically detecting said contradictions includes generating a report which identifies said contradictions and said resolutions (p. 11, lines 1-10).

#### **Claim 9**

The method of claim 8 wherein said step of entering said market data includes providing null promotion data for individual said customer segments, said null promotion data being indicative of probabilities of achieving said business management objectives



Application No. 09/851,514  
Appeal Brief

during an absence of said promotions (p. 4, line 36 – p. 5, line 15; p. 6, lines 28-29).

**Claim 11**

A computer system for forming a promotion campaign plan comprising (FIG. 1: p. 5, lines 34-36):

a server (FIG. 1: #16) coupled to a database (FIG. 1: #28; p. 6, lines 8-21),  
wherein the database includes:

stored customer segment information indicative of mapping a plurality of customers to a smaller number of customer segments, said mapping being based on attributes that are perceived as being relevant to customer activity when presented with promotions (p. 3, lines 7-14; p. 7, lines 8-20);

stored promotion information regarding a plurality of promotions (p. 7, lines 21-26; p. 4, line 36 – p. 5, line 15);

stored market information regarding marketing considerations relevant to said promotions (p. 4, line 30 – p. 5, line 15);

stored management information regarding business objectives and business constraints relevant to said promotions (p. 4, lines 4-14; p. 9, lines 4-38); and

wherein the server includes an optimization engine configured to design a promotion campaign as an algorithmic response to each of said stored customer segment information, said stored promotion information, said stored market information and said stored management information, wherein said promotion campaign indicates promotion strategies on a promotion-by-promotion and segment-by-segment basis, said optimization engine being enabled to detect and automatically address inconsistencies and contradictions with the management information in achieving said business objectives and business constraints, automatically identify resolutions to said inconsistencies and contradictions, and implement said resolutions in said promotion campaign plan (p. 3, line 27 – p. 4, line 3; p. 9, lines 4-27; p. 10, line 35 – p. 11, line 22).

**Claim 16**

The system of claim 11 wherein said optimization engine is cooperative with an efficiency frontier engine (FIG. 3: #80) that is configured to recognize said

Application No. 09/851,514  
Appeal Brief

inconsistencies and to determine trade-offs among said business objectives, said efficiency frontier engine being responsive to a hierarchy of said business objectives (p. 8, line 29 – p. 9, line 27).

#### **Claim 17**

A computer implemented method of determining differential promotion allocation among website visitors comprising the automated programming steps of (FIGS. 1-3: p. 3, lines 7-14; p. 6, lines 8-29):

entering, into a computer, market data that includes visitor conversion information and null promotion information, said conversion information being specific to visitor groups that are based on common attributes among said visitors, said conversion information identifying group-by-group characteristics relating to desired website visitor activities, said null promotion information identifying factors specific to said groups and said desired website visitor activities when there is an absence of promotions that are designed to promote said website visitor activities (p. 4, line 30 – p. 5, line 15; p. 6, line 16 – p. 7, line 6);

entering, into the computer, management data that includes business objectives and business constraints, said business objectives including information regarding target numbers of conversions and target revenue and profit levels, said business constraints including group-by-group budget constraints (p. 4, lines 4-14; p. 9, lines 4-38); and

computing, with the computer, a campaign plan that is specific to each said group and each said promotion, said campaign plan being based upon said market and management data and automatically detecting and addressing contradictions among said objectives, automatically identifying resolutions to said contradictions, and implementing said resolutions in said campaign plan (p. 6, line 30 – p. 7, line 20; p. 10, line 35 – p. 11, line 22).

#### **Claim 19**

The method of claim 17 wherein said contradictions are mutually exclusive (p. 11, lines 1-10).

Application No. 09/851,514  
Appeal Brief

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

Claims 1-2 and 4-20 rejected under 35 USC § 103(a) as being unpatentable over USPN 5,848,396 (Gerace) in view of USPN 5,406,477 (Harhen) and USPN 5,687,322 (Deaton).

Application No. 09/851,514  
Appeal Brief

## **VII. ARGUMENT**

The rejection of claims 1-2 and 4-20 is improper, and Applicants respectfully requests withdraw of this rejection.

The claims do not stand or fall together. Instead, Applicants present separate arguments for various independent and dependent claims. Each of these arguments is separately argued below and presented with separate headings and sub-heading as required by 37 C.F.R. § 41.37(c)(1)(vii) as follows:

- I. Claims 1, 5-8, 10-15, 17-18, and 20, with claim 1 being representative of the group.
- II. Claim 2.
- III. Claim 4.
- IV. Claim 9.
- V. Claim 16.
- VI. Claim 19.

### **Claim Rejections: 35 USC § 103**

Claims 1-2 and 4-20 rejected under 35 USC § 103(a) as being unpatentable over USPN 5,848,396 (Gerace) in view of USPN 5,406,477 (Harhen) and USPN 5,687,322 (Deaton). Applicants respectfully traverse:

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art cited must teach or suggest all the claim limitations. See M.P.E.P. § 2143. Applicants assert that the rejection does not satisfy these criteria.

Application No. 09/851,514  
Appeal Brief

**I. Claims 1, 5-8, 10-15, 17-18, and 20**

This group contains three independent claims (1, 11, and 17). Applicants select and argue independent claim 1 as being representative of this group.

**Elements of Independent Claims Not Taught or Shown**

The independent claims recite numerous recitations that are not taught or suggested in Gerace in view of Harhen and Deaton. For example, claim 1 recites (emphasis added):

said campaign plan being defined to **automatically detecting contradictions** between said constraints and other aspects of said entered management information, **automatically identifying resolutions** to said contradictions, and implementing said resolutions in said campaign plan.

Nowhere do Gerace, Harhen, and/or Deaton teach or suggest the noted recitations. On page 6, the Office Action makes the following admission:

Gerace does not explicitly disclose automatically detecting contradictions between said constraints and other aspects of said entered management information;  
automatically identifying resolutions to said contradictions, and implementing said resolutions in said campaign plan.

Applicants agree with this admission. The Office Action, however, attempts to cure these deficiencies with Harhen. Applicants respectfully disagree.

The Office Action cites several locations in Harhen for teaching the noted recitations. Applicants address each of these citations.

First, the Office Action cites the Abstract of Harhen. Portions of the Abstract are reproduced below:

Application No. 09/851,514  
Appeal Brief

Applying reasoning methods to a single projection problem generates a set of conflicting intermediate hypotheses that the present invention can resolve to form a single final hypothesis through a reconciliation process that evaluates quality factors associated with the intermediate hypotheses. A problem solution tree tracks the solution process to provide to the user a full explanation of the methods chosen or discarded and data relied upon or disregarded.

The Abstract of Harhen does not teach automatically detecting conflicting information of **management information** and automatically identifying resolutions to the conflicting information. In other words, Harhen does not teach the automated process of both (1) detecting contradictions in management information and (2) identifying resolutions to the contradictions in the management information. Further, the element of management information must be kept in context of the recitations of the claim. Claim 1 is a computer method for determining differential promotion allocation among prospective customers. Management information that is specific to business management objective is entered. The teachings in Harhen's Abstract cannot be pulled out of context and used as a piecemeal hindsight construction to teach elements not suggested in Gerace.

Second, the Office Action cites Harhen at col. 6, lines 45-67 and col. 6, lines 52-55. Portions of this section are reproduced below:

This architecture enables the system to be self-structuring, and enables the system to deal either with partial models of incomplete information or with situations when conflicting information appears in the knowledge base. In this manner, diverse and inconsistent knowledge such as budgets, plans, expectations, causal models and historical knowledge, can be integrated and interpreted within a single architecture. (Col. 6, lines 49-56).

Application No. 09/851,514  
Appeal Brief

This section of Harhen teaches that the system can deal with situations when conflicting information appears in the knowledge base. The important question is: How does Harhen deal with such situations? Harhen explains that inconsistent knowledge “can be integrated and interpreted within a single architecture.” Harhen does not teach automatically detecting conflicting information of management information and automatically identifying resolutions to the conflicting information. In other words, Harhen does not teach the automated process of both (1) detecting contradictions and (2) identifying resolutions to the contradictions. Also, Harhen never teaches that the conflicting information is “aspects of entered management information” as recited in claim 1.

Third, the Office Action cites Harnen at col. 14, lines 52-28, reproduced below (emphasis added):

The present invention presents an architecture that **allows the user to declare the known conceptual relationships that describe his or her planning domain. Through progressive refinement of this conceptual map, the user, in his interaction with the system,** approaches an understanding of the implications and contradictions of such a network of knowledge. In this manner, he deepens his knowledge of the planning context. (Col.14, lines 50-59).

This section of Harhen teaches that **the user** interacts with the system for understanding the contradictions. Applicants respectfully submit that this section of Harhen teaches away from the recitations in the claims. Nowhere does this section of Harhen teach or suggest automatically detecting contradictions of management information, automatically identifying resolutions to the contradictions, and implementing the resolutions in the campaign plan.

Fourth, the Office Action cites Harnen col. 41, lines 11-20, reproduced below (emphasis added):

Application No. 09/851,514  
Appeal Brief

More than one statement, such as an opinion, may be attached to a variable. Each statement results in a separate intermediate hypothesis and all are evaluated in the reconciliation process. **Thus, the system supports contradictory opinions in making a variable projection.** As all statements are considered to be axiomatic equally, the reconciliation process looks to other factors beyond the proof values such as the date of the opinion (with the latest being most valuable), to solve conflicts.

This section of Harhen teaches that the system supports contradictory opinions in making a variable projection. This section of Harhen does not teach or suggest automatically identifying resolutions to contradictions of management information and then **implementing the resolutions in the campaign plan.**

Further, claim 1 recites "a campaign plan for allocating presentations of a plurality of promotions among said customers." The claim then recites "implementing said resolutions in said campaign plan." Harhen does not teach or suggest a campaign plan for allocating presentations of a plurality of promotions to customers and implementing resolutions in the campaign plan. By contrast, Harhen teaches a computer-based method for enterprise analysis so a user can generate value projections (see Abstract and Summary). Harhen does not teach or suggest a campaign plan of promotions among customers and then implementing resolutions in the campaign plan of promotions.

For at least these reasons, Gerace in view of Harhen and Deaton does not teach or suggest all of the recitations in claim 1. Independent claims 11 and 17 recite some similar recitations as recited in claim 1. Thus, for at least the reasons given in connection with independent claim 1, independent claims 11 and 17 are allowable over Gerace in view of Harhen and Deaton.

A dependent claim inherits the recitations of an independent claim. Thus, for at least the reasons given in connection with independent claims 1, 11, and 17, all dependent claims are allowable over Gerace in view of Harhen and Deaton.



Application No. 09/851,514  
Appeal Brief

**No Suggestion or Motivation to Combine or Modify Gerace and Harhen**

On page 6, the Office Action makes the following admission:

Gerace does not explicitly disclose automatically detecting contradictions between said constraints and other aspects of said entered management information;  
automatically identifying resolutions to said contradictions, and implementing said resolutions in said campaign plan.

Applicants agree with this admission. The Office Action, however, attempts to cure these deficiencies with Harhen. Applicants respectfully disagree since no suggestion or motivation exists for combining and/or modifying Gerace and Harhen.

Gerace teaches a method and apparatus for determining behavior or psychographic profile of a computer user. To accomplish this, Gerace teaches “a tracking and profiling member for recording user activity” (see col. 2, lines 6-11). Nowhere does Gerace teach, suggest, or even contemplate automatically detecting contradictions of management information, automatically identifying resolutions to the contradictions, and implementing the resolutions in the campaign plan.

Harhen teaches a computer-based method for enterprise analysis that a user can use to generate value projections (see Abstract). Harhen teaches using the computer-based method for solving deficiencies in strategic planning in manufacturing (see col. 4, lines 32-36). Unlike Gerace, nowhere does Harhen teach or suggest a method or apparatus for determining behavior or psychographic profiles of a computer user. Thus, **Gerace and Harhen are directed to solving completely different problems.**

Harhen does mention the phrase “the system supports contradictory opinions in making a variable projection” (see col. 41, lines 15-16). Nowhere does Harhen teach or suggest automatically detecting contradictions of management information, automatically identifying resolutions to the contradictions, and implementing the resolutions in the campaign plan. Instead, the contradictory opinions in Harhen are for making a variable projection.

Application No. 09/851,514  
Appeal Brief

The Examiner must provide *objective evidence*, rather than subjective belief and unknown authority, of the requisite motivation or suggestion to combine or modify the cited references. *In re Lee*, 61 U.S.P.Q.2d. 1430 (Fed. Cir. 2002). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Such teaching or suggestion does not exist.

In short, Harhen and Gerace are directed to different problems and solutions. No motivation exists in the references for combining the teachings.

Further, Applicants argue that the Examiner is using hindsight and a piecemeal construction to combine Harhen and Gerace to teach the elements of claim 1. When prior art references require a selected combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gained from the invention itself, i.e., something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988). One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

For at least these reasons, the claims are allowable over Gerace in view of Harhen and Deaton.

Application No. 09/851,514  
Appeal Brief

### **No Expectation of Success**

Even assuming arguendo that the combination of Harhen and Gerace is proper (which it is not), the combination does not teach or suggest the recitations of the claims.

As noted above, Harhen merely teaches that a system can support contradictory opinions in making a variable projection. Gerace is completely silent on detecting and identifying contradictions and on implementing resolutions. Further, Harhen does not teach or suggest that resolutions to contradictions are implemented in a promotion campaign plan directed to customers. New elements and significant substitutions would have to be made to Gerace and/or Harhen to arrive at the claimed recitations. Further, this combination would not yield a reasonable expectation of success for automatically detecting contradictions of management information, automatically identifying resolutions to the contradictions, and implementing the resolutions in the campaign plan.

The Examiner argues that Applicants have not submitted evidence and thus have not proven no expectation of success. Applicants respectfully disagree. The law does not require Applicants to submit such evidence to show no expectation of success. Instead, the law states that Applicant may submit such evidence for consideration. Such evidence, though, is not required.

For at least these reasons, the claims are allowable over Gerace in view of Harhen and Deaton.

### **II. Claim 2**

Claim 2 recites a computer implemented method that automatically identifies an inconsistency in achieving two business management objectives. The claim then recites “**automatically determining a guideline for resolving a trade-off** between said two business management objectives” (emphasis added). Nowhere does that art of record teach or suggest these recitations. The Office Action argues these recitations are taught in Gerace at col. 15, lines 10-15 and col. 15, lines 29-35. Applicants respectfully disagree.

Column 15, lines 10-15 in Gerace teaches a mathematical equation for ranking the advertisements based on a number of hits and clicks. Column 15, lines 29-35 teaches a traditional regression analysis used to determine the weight of criteria for the intended customers. Together, these sections of Gerace teach a program that uses an equation to

Application No. 09/851,514  
Appeal Brief

rank advertisements. The advertisements can be adjusted based on how criteria are weighted. These teachings, though, are much different than the elements recited in the claim. Claim 2 recites that the program automatically identifies an inconsistency and then automatically determines a guideline for resolving a trade-off. Gerace never determines inconsistencies in business objectives. Further, Gerace never determines **guidelines for resolving a trade-off** between the business objectives. Again, Gerace merely teaches that the program can adjust advertisements based on how criteria are weighted, not determine inconsistencies and guidelines for resolving a trade-off as claimed.

### III. Claim 4

Claim 4 recites automatically detecting contradictions and then generating a report which **identifies the contradictions and resolutions**. In other words, contradictions in the management information are automatically identified. Then, the program generates a report that includes an identification of the contradictions and resolutions. The Office Action argues these recitations are taught in Gerace at col. 33, line 35 – col. 34, line 27. Applicants respectfully disagree.

The cited section of Gerace is an appendix that uses the word “report.” Claim 4, however, is not simply claiming use of a report. By contrast, claim 4 is claiming a report that includes an identification of the contradictions and resolutions. Nowhere does the cited section of Gerace teach or suggest such a report. This section of Gerace teaches web-based reporting that includes advertisements and other reports not related whatsoever to the claim recitations of claim 4.

### IV. Claim 9

Claim 9 recites entering market data that includes null promotion data. According to MPEP § 2111.01, the words of a claim must be given their plain meaning unless they are defined in the specification. Applicants’ specification provides a definition for the term “null promotion” as follows:

A “null promotion” of a product is a conversion that occurs without the presentation of a promotion. (See p. 6, lines 28-29).

Application No. 09/851,514  
Appeal Brief

The issue is: Does Gerace teach or suggest entering market data that includes null promotion data as this term is defined in Applicants' specification? Gerace does not.

The Office Action cites column 19, lines 19-25 of Gerace. This section of Gerace of reproduced below for convenience:

As such, program 31 tracks advertiser usage as user information and develops demographic profiles for advertisers. This data is stored in the sponsor's Users Objects 33a (FIG. 5a). When the sponsor-user of the example decides to create a second package, the sponsor-user clicks on a "request an ad package" option and completes a form detailing the package (number of hits/click throughs requested, profiling, etc.).

As clearly taught, this section of Gerace teaches a program that tracks advertiser usage and develops demographic profiles for advertisers. By contrast, claim 9 recites entering market data that includes null promotion data that is defined as a conversion that occurs without the presentation of a promotion.

#### **V. Claim 16**

Claim 16 recites an efficiency frontier engine that recognizes inconsistencies and determines trade-offs among business objectives. In other words, the optimization engine detects inconsistencies with the management information in achieving business objectives and the frontier engine recognizes these inconsistencies and determines trade-offs. Nowhere does the art of record teach or suggest these recitations. The Office Actions cites Gerace at column 12, lines 27-35 for teaching claim 16. Applicants respectfully disagree.

Column 12, lines 27-35 of Gerace is reproduced for convenience:

In a preferred embodiment, the sponsor specifies in Ad Series Object 33c the required and/or preferred psychographic and/or

Application No. 09/851,514  
Appeal Brief

demographic criteria and relative importance (e.g., weight) with respect to each criterion.

As clearly taught, this section of Gerace teaches that the sponsor of an advertisement can specify the psychographic or demographic criteria. Nowhere does this section teach or suggest that an efficiency frontier engine that recognizes inconsistencies and determines trade-offs among business objectives as recited in claim 16.

#### **VI. Claim 19**

In the base claim, a campaign plan is based on management data that includes business objectives. The computer method automatically detects and addresses contradictions among the business objectives. Claim 19 further recites that the contradictions are **mutually exclusive**. Nowhere does the art of record teach or suggest these recitations.

The Office Action never cites a location in the art of record for teaching the elements of claim 19.<sup>1</sup> Instead, the Office Action cites a dictionary definition of “mutually exclusive” and concludes: “Therefore, it is obvious that the inconsistencies and contradictions of Harhen can be mutually exclusive.”<sup>2</sup> Applicants argue that this argument is circular. In other words, the Examiner’s argument is as follows: Since Harhen teaches contradictions and since the dictionary defines “mutually exclusive,” it would be obvious for Harhen’s contradictions to be mutually exclusive. This argument is legally improper.

In contrast to the Examiner’s position, Applicants argue that the law states there must be a suggestion or motivation in the references to modify the teachings. The Examiner cannot use the dictionary in an effort to **piecemeal construct with hindsight** the recitations of the claims. Gerace and Harhen do not teach or suggest that the contradictions can be mutually exclusive.

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<sup>1</sup> See Final OA at p. 2: Claims 1, 11, 17, 19, and 20 are collectively rejected, but claim 19 is never separately addressed.

<sup>2</sup> See Final OA at p. 7.

Application No. 09/851,514  
Appeal Brief

### CONCLUSION

In view of the above, Applicants respectfully request the Board of Appeals to reverse the Examiner's rejection of all pending claims.

Any inquiry regarding this Amendment and Response should be directed to Philip S. Lyren at Telephone No. (281) 514-8236, Facsimile No. (281) 514-8332. In addition, all correspondence should continue to be directed to the following address:

**Hewlett-Packard Company**  
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Respectfully submitted,

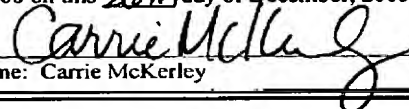


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#### CERTIFICATE UNDER 37 C.F.R. 1.8

The undersigned hereby certifies that this paper or papers, as described herein, is being transmitted to the United States Patent and Trademark Office facsimile number 571-273-8300 on this 26th day of December, 2005.

By



Name: Carrie McKerley

Application No. 09/851,514  
Appeal Brief

### **VIII. Claims Appendix**

1. A computer implemented method of determining differential promotion allocation among prospective customers comprising the steps of:

entering, into a computer, management information that is specific to business management objectives and constraints, including entering budget information; and

defining, with the computer, a campaign plan for allocating presentations of a plurality of said promotions among said customers, including using automated processing to form said campaign plan on the basis of customer segments and said management information, said customer segments being based upon customer commonalities with respect to at least one customer attribute, said campaign plan being defined to automatically detecting contradictions between said constraints and other aspects of said entered management information, automatically identifying resolutions to said contradictions, and implementing said resolutions in said campaign plan.

2. The method of claim 1 wherein said step of defining said campaign plan includes:

automatically identifying an inconsistency in achieving two of said business management objectives;

automatically determining a guideline for resolving a trade-off between said two business management objectives; and

utilizing said guideline in configuring said campaign plan.

3. (canceled)

4. The method of claim 1 wherein said step of automatically detecting said contradictions includes generating a report which identifies said contradictions and said resolutions.

5. The method of claim 1 wherein said step of entering said management information includes entering data indicative of budget constraints (1) for individual said customer segments and (2) for said overall campaign plan.



Application No. 09/851,514  
Appeal Brief

6. The method of claim 1 wherein said campaign plan is specific to application via the global communications network referred to as the Internet.

7. The method of claim 1 wherein said campaign plan is specific to application via a telecommunications network.

8. The method of claim 1 further comprising a step of entering market data on which said campaign plan is further based, including entering conversion data that is indicative of the responsiveness of each said customer segment to said promotions.

9. The method of claim 8 wherein said step of entering said market data includes providing null promotion data for individual said customer segments, said null promotion data being indicative of probabilities of achieving said business management objectives during an absence of said promotions.

10. The method of claim 1 further comprising a step of entering supply chain data on which said campaign plan is further based, said supply chain data being indicative of availability of resources that are subject matter of said promotions.

11. A computer system for forming a promotion campaign plan comprising:  
a server coupled to a database, wherein the database includes:  
stored customer segment information indicative of mapping a plurality of customers to a smaller number of customer segments, said mapping being based on attributes that are perceived as being relevant to customer activity when presented with promotions;  
stored promotion information regarding a plurality of promotions;  
stored market information regarding marketing considerations relevant to said promotions;  
stored management information regarding business objectives and business constraints relevant to said promotions; and

Application No. 09/851,514  
Appeal Brief

wherein the server includes an optimization engine configured to design a promotion campaign as an algorithmic response to each of said stored customer segment information, said stored promotion information, said stored market information and said stored management information, wherein said promotion campaign indicates promotion strategies on a promotion-by-promotion and segment-by-segment basis, said optimization engine being enabled to detect and automatically address inconsistencies and contradictions with the management information in achieving said business objectives and business constraints, automatically identify resolutions to said inconsistencies and contradictions, and implement said resolutions in said promotion campaign plan.

12. The system of claim 11 wherein said stored management information includes budget constraints for each said customer segment, said optimization engine being configured to be responsive to said budget constraints such that said promotion campaign includes designations of portions of specific said customer segments that are to be presented with particular said promotions.

13. The system of claim 11 wherein said optimization engine is cooperative with a feasibility engine that is configured to recognize and address said contradictions in said stored management information, said feasibility engine being enabled to determine resolutions to said contradictions that involve said business constraints.

14. The system of claim 11 further including stored supply data regarding availability of either or both of goods and services being offered to said customers.

15. The system of claim 14 wherein said stored supply data indicates on-hand inventory and currently ordered inventory.

16. The system of claim 11 wherein said optimization engine is cooperative with an efficiency frontier engine that is configured to recognize said inconsistencies and to determine trade-offs among said business objectives, said efficiency frontier engine being responsive to a hierarchy of said business objectives.

Application No. 09/851,514  
Appeal Brief

17. A computer implemented method of determining differential promotion allocation among website visitors comprising the automated programming steps of:

entering, into a computer, market data that includes visitor conversion information and null promotion information, said conversion information being specific to visitor groups that are based on common attributes among said visitors, said conversion information identifying group-by-group characteristics relating to desired website visitor activities, said null promotion information identifying factors specific to said groups and said desired website visitor activities when there is an absence of promotions that are designed to promote said website visitor activities;

entering, into the computer, management data that includes business objectives and business constraints, said business objectives including information regarding target numbers of conversions and target revenue and profit levels, said business constraints including group-by-group budget constraints; and

computing, with the computer, a campaign plan that is specific to each said group and each said promotion, said campaign plan being based upon said market and management data and automatically detecting and addressing contradictions among said objectives, automatically identifying resolutions to said contradictions, and implementing said resolutions in said campaign plan.

18. The method of claim 17 further comprising entering supply data for use in said computing step, said supply data being indicative of goods or services that are offered to said website visitors.

19. The method of claim 17 wherein said contradictions are mutually exclusive.

20. The method of claim 17 wherein said computing step includes designating percentages for each said group and each said promotion, where each percentage represents the portion of said website visitors within a particular said group that will be presented with a particular said promotion, with at least some of said percentages being

Application No. 09/851,514  
Appeal Brief

less than one hundred percent.

Application No. 09/851,514  
Appeal Brief

**IX. EVIDENCE APPENDIX**

None.

Application No. 09/851,514  
Appeal Brief

**X. RELATED PROCEEDINGS APPENDIX**

None.